



UNITED STATES PATENT AND TRADEMARK OFFICE

A

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,860	02/28/2002	Ronald P. Cocchi	PD-201161	1680

20991 7590 10/18/2005

THE DIRECTV GROUP INC
PATENT DOCKET ADMINISTRATION RE/R11/A109
P O BOX 956
EL SEGUNDO, CA 90245-0956

EXAMINER

HENEGHAN, MATTHEW E

ART UNIT PAPER NUMBER

2134

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/085,860	COCCHI ET AL.	
	Examiner	Art Unit	
	Matthew Heneghan	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3 DS's</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-59 have been examined.

Information Disclosure Statement

2. The following Information Disclosure Statements in the instant application have been fully considered:

IDS filed 28 February 2002.

IDS filed 25 February 2003.

IDS filed 20 August 2004.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: items 412, 414, and 416 in figure 4 and items 520 and 528 in figure 5. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being

Art Unit: 2134

amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 12, 13, 27, 28, 42, 43, 57, and 58 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Though the specification suggests the use of multiplexors with the hardware state machine, nowhere is it described the manner in which the multiplexors are actually used or configured.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 12, 13, 27, 28, 42, 43, 57, and 58 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: As discussed above, it is unclear how the multiplexors relate to the remainder of the invention.

6. Claims 6, 17, 21, 32, 36, 47, and 51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 17, 32, and 47, the phrase "or other distribution channel" renders the claims indefinite because the claims include elements not actually disclosed (those encompassed by "or other distribution channel"), thereby rendering the scope of the claims unascertainable.

Regarding claims 6, 21, 36, and 51, it is unclear what the term "uniquely encrypted, group encrypted" encompasses. It is being presumed that this teaches to the encryption key being changed at least periodically.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-12, 14-27, 29-42, 44-57, and 59 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,157,719 to Wasilewski et al.

As per claims 15, 30, and 45, Wasilewski discloses an access system for set-top boxes wherein configuration information may be transmitted to the set-top box as a one-time event (i.e. asynchronously). Since the set-top box's function is to determine whether an encrypted instance should be decrypted, it constitutes a security component that controls access to digital services. The received configuration information (the EMM) comprises decryption keys (control words) to be implemented (see column 6, line 24 to column 7, line 24) in a hardware state machine (the DHCT) such as an ASIC (see column 15, lines 32-36 and figures 2B and 3).

As per claim 1, a control suite (the control center) sends transmissions via satellite, which inherently employs an uplink center for sending transmissions to the satellite. The stream is incorporated at a media server for distribution (see column 15, lines 7-24).

As per claims 2, 16, 31, and 46, the system comprises a smart card (see column 21, line 13).

As per claims 17, 32, and 47, the configuration information may be sent over the broadcast channel, or another channel (see column 5, lines 6-11), such as the Internet (see column 7, lines 47-50).

As per claims 3-5, 18-20, 33-35, and 48-50, the configuration information is encrypted using a public key protocol such as RSA (see column 6, lines 60-66).

As per claims 6, 21, 36, and 51, the control words are encrypted using an algorithm having periodic key changes to the MSK (see column 6, lines 39-42 and 56-57).

As per claims 7, 22, 37, and 52, the configuration information is decrypted at the DHCT, which is entirely protected in that it is only accessible through the encrypted interface, and placed in storage (registers) within the DHCT (see column 11, line 41 to column 12, line 21 and column 15, lines 63-64).

As per claims 8, 9, 23, 24, 38, 39, 53, and 54, the received EMM is only retained by the DHCT if the associated digest is confirmed as being correct (see column 11, lines 41-47).

As per claims 10, 25, 40, and 55, the entitlement agent may also directly provide encrypted instances to the entire service distribution organization, thereby making it a synchronous command (see column 12, lines 27-39). These are sent as Global Broadcast Messages (see column 13, lines 18-41).

As per claims 11, 14, 26, 29, 41, 44, 56, and 59, the components of the DHCTSE, which contains the hardware state machine, are only accessible to the

system bus or I/O via the DHCT interface. Components of the DHCTSE communicate with one another via a local bus (see figure 12 and column 21, lines 15-27).

As per claims 12, 27, 42, and 57, a demultiplexor (which is a type of multiplexor) is used at the beginning of the decryption process (see column 7, lines 8-16 and figure 2B).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 13, 28, 43, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,157,719 to Wasilewski et al. as applied to claims 1, 15, 30, and 45 above, and further in view of U.S. Patent No. 5,222,141 to Killian.

Wasilewski does not disclose the use of multiplexors after decryption.

Killian discloses the use of a multiplexor (MUX) at the end of an encryption/decryption process, and notes that it is used to select the input to be passed out of the scrambler stage (see column 2, lines 45-51). When performing a symmetric algorithm, such as DES, encryption and decryption circuits are interchangeable.

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Wasilewski by using a multiplexor after the decryption stage, as disclosed by Killian, in order to select the input to be passed out of that stage.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,853,385 to MacInnis et al. discloses a system for decoding digital transmissions in hardware.

U.S. Patent Application Publication No. 2002/0073428 to Gurevich et al. discloses a system for purchasing and receiving encrypted transmissions using a set-top box.

U.S. Patent Application Publication No. 2003/0046686 to Candelore et al. discloses a system for only encrypting a portion of the transmission being sent to a set-top box.

U.S. Patent Application Publication No. 2004/0016002 to Handelman et al. discloses a system for configuring hardware in a set-top box.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Heneghan, whose telephone number is

Art Unit: 2134

(571) 272-3834. The examiner can normally be reached on Monday-Friday from 8:30 AM - 4:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse, can be reached at (571) 272-3838.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

Or faxed to:

(571) 273-3800

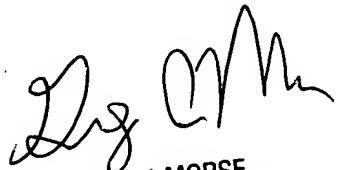
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MEH



September 30, 2005



GREGORY MORSE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2134